

**REMARKS/ARGUMENTS**

Applicants have received and carefully reviewed the Final Office Action of the Examiner mailed January 19, 2006. Claims 1-9, 12-32, 34-49 and 82-106 remain pending. Reconsideration and reexamination are respectfully requested.

In paragraph 5 of the Final Office Action, the Examiner rejected claims 1-9, 12-16, 82, 83, 87 and 98 under 35 U.S.C. § 103(a) as being unpatentable over Alles (2005/0116055 A1) in view of Wacker et al. (U.S. Patent 6,851,621).

Wacker et al. was filed on August 8, 2003 and issued on February 8, 2005. The present application was filed on December 2, 2003. As such, Wacker et al only qualifies as prior art under 35 U.S.C. §102(e)/103.

35 U.S.C. § 103(c) states:

*35 U.S.C. 103. Conditions for patentability; non-obvious subject matter.*

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(c) Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

35 U.S.C. 103(c) applies to all utility, design and plant patent applications filed on or after November 29, 1999, which includes the present application. The subject matter of Walker et al. and the subject matter of the present application were, at the time the invention was made, owned by or subject to an obligation of assignment to a common assignee, namely, Honeywell International Inc., of Morristown, New Jersey, U.S.A. In view of the foregoing, Walker et al. is disqualified as prior art under 35 U.S.C. § 103. In view thereof, the rejection of claims 1-9, 12-16, 82, 83, 87 and 98 under 35 U.S.C. § 103(a) as being unpatentable over Alles (2005/0116055 A1) in view of Wacker et al. (U.S. Patent 6,851,621) is improper and should be withdrawn.

In paragraph 7 of the Final Office Action, the Examiner rejected claim 17 under 35 U.S.C. § 103(a) as being unpatentable over Alles (2005/0116055 A1) in view of Wacker et al.,

and further in view of Shah (U.S. Patent 6,595,430). As noted above, Walker et al. is disqualified as prior art under 35 U.S.C. § 103. Therefore, the rejection of claim 17 under 35 U.S.C. § 103(a) as being unpatentable over Alles (2005/0116055 A1) in view of Wacker et al. (U.S. Patent 6,851,621) and further in view of Shah (U.S. Patent 6,595,430) is improper and should be withdrawn.

In paragraph 8 of the Office Action, the Examiner rejected claims 18-32, 34-36, 41-49, 84-86, 88-97 and 99-106 under 35 U.S.C. § 103(a) as being unpatentable over Alles (2005/0116055 A1) in view of Shah (U.S. Patent 6,595,430). Applicants respectfully disagree that claims 18-32, 34-36, 41-49, 84-86, 88-97 and 99-106 are unpatentable over Alles in view of Shah.

As per claim 18, the Examiner states that Alles discloses a method of programming a multiple-day schedule on a HVAC thermostat device that is adapted to be mounted to a wall, the HVAC thermostat device including a temperature sensor and a menu-driven user interface, the schedule having at least one schedule parameter, comprising the steps of: initiating an editing mode (see page 16 [0167], "edit-mode") using the menu-driven user interface ("PDA interface") of the HVAC thermostat (see page 5 [0065], "wireless thermometer 70"); selecting two or more days (see page 16 [0166], "select the days") of the week (see page 16 [0167], "entire week") using the menu-driven user interface ("PDA interface") of the HVAC thermostat ("wireless thermometer 70") to modify the schedule (see page 16 [0167], "edit-mode"); changing the at least one schedule parameter (see page 16 [0172], "editing a temperature schedule") for one or more periods (see page 15 [0162], "periods") during the selected days ("select the days"); and exiting the editing mode (see page 16 [0172], "SAVE selection 2040") using the menu-driven user interface ("PDA interface") of the HVAC thermostat ("wireless thermometer 70"). (Emphasis Added).

The Examiner acknowledges that Alles does not disclose using the menu-driven user interface on the HVAC thermostat (i.e. "wireless thermometer 70"). However, the Examiner states that Shah discloses "[t]he display unit 200 may be very similar to the touch screen display used in a hand-held personal digital assistant ("PDA"), such as a Palm brand PDA manufactured

by 3 Com, a Jornada brand PDA manufactured by Hewlett Packard, etc. Of course the graphical user interface system could also be manufactured to be integrated with a thermostat itself. In such an embodiment, a touch-sensitive LCD display is coupled with the thermostat's existing central processing unit and RAM." The Examiner concludes that at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the PDA interface taught by the Alles reference with the integrated graphical user interface thermostat system taught by the Shah reference. The Examiner states that one of ordinary skill in the art would have been motivated to modify the PDA interface with the integrated graphical user interface thermostat system to couple a touch-sensitive LCD display with the thermostat's existing central processing unit and RAM.

As best understood, and from the remarks on page 11 of the Office Action, it appears the Examiner is equating the wireless thermometers 70 of Alles with the HVAC thermostat of claim 18, and further that it would have been obvious in view of Shah to include the PDA interface of the PDA device 80 of Alles into the wireless thermometers 70, resulting in a method of programming a multiple-day schedule on an HVAC thermostat device that is adapted to be mounted to a wall.

In Alles, the HVAC system appears to be controlled by an HVAC controller 60 (or HVAC controller 22). The PDA device 80 appears to be merely a user input collecting device designed to guide and collect input from a user. Note that none of the user inputs collected by the PDA device 80, including the schedule changes, appear to have any effect whatsoever on the HVAC system until after the user presses the "sync" button 2044 on the PDA interface (see Alles; Figure 20 and the corresponding description). Thus, it does not appear that the PDA device 80 actually "controls" the HVAC system, at least as far as executing or operating a programmed schedule or providing control signals to the HVAC system based thereon. Instead, the PDA device 80 appears to merely collect user input, and when requested by the user, downloads the user settings to the HVAC controller 60 for use by the HVAC controller 60 to control the HVAC system. Note that if the user does not select the "sync" button 2044 on the PDA interface, the changes made by the user will have no effect on the operation of the HVAC

system.

The wireless thermometers 70 of Alles also do not appear to “control” the HVAC system, at least as far as executing or operating a programmed schedule or providing control signals to the HVAC system based thereon. The wireless thermometers 70 do appear to display the current room temperature, as well as collect some rudimentary user input (warmer, cooler, N/S). However, the collected user input must be wirelessly transmitted to the HVAC controller 60, for use by the HVAC controller 60 in controlling the HVAC system.

According to the Examiner, it would have been obvious to include the PDA interface of the PDA device 80 into the wireless thermometer 70 in order to couple a touch-sensitive LCD display with the existing central processing unit and RAM of the wireless thermometer 70. However, it should be pointed out that even if the PDA interface of the PDA device 80 were incorporated into the wireless thermometer 70, as the Examiner suggests, Alles teaches that the new schedule data collected from the user via the PDA interface on the wireless thermometer 70 would not have any effect until the user selected the “sync” button 2044 on the PDA interface to download the changes to the HVAC controller 60. Furthermore, the resulting wireless thermometer 70 would not actually “control” the HVAC system, at least as far as executing or operating a programmed schedule or providing control signals to the HVAC system based thereon.

While not agreeing with the Examiner’s rejection, Applicants have elected to amend claim 18 to recite:

18. (Currently Amended) A method of programming a multiple-day schedule on a HVAC thermostat device that is adapted to be mounted to a wall, the HVAC thermostat device including a temperature sensor and a menu-driven user interface, the schedule having at least one schedule parameter, comprising the steps of:

initiating an editing mode using the menu-driven user interface of the HVAC thermostat;

selecting two or more days of the week using the menu-driven user interface of the HVAC thermostat to modify the schedule;

changing at least one schedule parameter for one or more periods during the selected days, resulting in a modified schedule;

exiting the editing mode using the menu-driven user interface of the HVAC thermostat; and  
operating the HVAC thermostat in accordance with the modified schedule.

(Emphasis Added). As can be seen, claim 18 now recites the step of operating the HVAC thermostat in accordance with the modified schedule. This amendment is supported at, for example, page 11, lines 2-3 of the present specification. In Alles, the PDA device 80 does not appear to “operate” in accordance with any schedule, let alone a modified schedule. Rather, and as noted above, the PDA device 80 appears to merely collect user input, and then download the data to the HVAC controller 60 when instructed to do so by the user via the “sync” button 2044. Likewise, the wireless thermometers 70 do not appear to “operate” in accordance with any schedule. Rather, the wireless thermometers 70 appear to merely collect user input, and download the data to the HVAC controller 60 at random or specified time intervals. As such, even if the PDA interface of Alles were somehow incorporated into a wireless thermometer 70, as the Examiner appears to be suggesting, the resulting device would not “operate” in accordance with any schedule, and in particular, with the modified schedule as recited in claim 18.

If anything, the HVAC controller 60 of Alles might “operate” in accordance with a modified schedule once the schedule parameters are downloaded from the PDA interface. However, the HVAC controller 60 of Alles is not part of a “HVAC thermostat device that is adapted to be mounted to a wall”, and further does not appear to have “a temperature sensor and a menu-driven user interface”, as recited in claim 18. For these and other reasons, claim 18 is believed to be clearly patentable over Alles in view of Shah. For similar and other reasons, dependent claims 19-32, 84, 88, and 99-101 are also believed to be clearly patentable over Alles in view of Shah.

Turning now to claim 34, which recites:

34. (Currently Amended) A programmable controller for use in controlling at least one system of a home, building and/or related grounds, the programmable controller comprising:  
an environmental sensor for measuring an environmental condition in or around the vicinity of the programmable controller;

- a user interface that includes a display;
- a memory unit for storing a set of schedule parameters, at least one of the scheduled parameters relating to the environmental condition measured by the environmental sensor; and
- a processor electrically coupled to the user interface, the memory unit and the environmental sensor, and configured to run a scheduling routine that generates control signals that control the at least one system of a home, building and/or related grounds in accordance with a schedule, wherein said scheduling routine including an editing mode for programming the schedule in the memory unit using the user interface;

wherein the editing mode allows the user to use the user interface of the programmable controller to concurrently select two or more days of the week to modify the schedule, and to edit the schedule parameters for the selected days.

(Emphasis Added). As can be seen, claim 34 recites a programmable controller for use in controlling at least one system of a home, building and/or related grounds. Claim 34 further recites that the programmable controller includes: an environmental sensor for measuring an environmental condition in or around the vicinity of the programmable controller; a user interface that includes a display; a memory unit for storing a set of schedule parameters, at least one of the scheduled parameters relating to the environmental condition measured by the environmental sensor; and a processor electrically coupled to the user interface, the memory unit and the environmental sensor. Claim 34 also recites that the processor is configured to run a scheduling routine that generates control signals that control the at least one system of a home, building and/or related grounds in accordance with a schedule, wherein said scheduling routine includes an editing mode for programming a schedule in the memory unit using the user interface, wherein the editing mode allows the user to use the user interface of the programmable controller to concurrently select two or more days of the week to modify the schedule, and to edit the schedule parameters for the selected days.

As detailed above with respect to claim 18, the PDA device 80 of Alles does not appear to “run a scheduling routine that generates control signals that control the at least one system of a home, building and/or related grounds in accordance with a schedule”. Rather, and as noted above, the PDA device 80 appears to merely collect user input, and then download the collected

data to the HVAC controller 60 when instructed to do so by the user via the “sync” button 2044. Likewise, the wireless thermometers 70 do not appear to “run a scheduling routine that generates control signals that control the at least one system of a home, building and/or related grounds in accordance with a schedule”. Rather, the wireless thermometers 70 appear to merely collect some rudimentary user input, and download the data to the HVAC controller 60 at random or specified time intervals. As such, even if the PDA interface of Alles were somehow incorporated into a wireless thermometer 70, as the Examiner appears to be suggesting, the resulting device would not “run a scheduling routine that generates control signals that control the at least one system of a home, building and/or related grounds in accordance with a schedule”, as recited in claim 34.

If anything, the HVAC controller 60 of Alles might “run a scheduling routine” that generates control signals that control the at least one system of a home, building and/or related grounds in accordance with a schedule, after the schedule parameters are downloaded from the PDA interface. However, the HVAC controller 60 of Alles does not appear to include, for example: an environmental sensor for measuring an environmental condition in or around the vicinity of the programmable controller; a user interface that includes a display; a processor electrically coupled to the user interface, the memory unit and the environmental sensor, and configured to run a scheduling routine wherein said scheduling routine including an editing mode for programming the schedule in the memory unit using the user interface, wherein the editing mode allows the user to use the user interface of the programmable controller to concurrently select two or more days of the week to modify the schedule, and to edit the schedule parameters for the selected days, as recited in claim 34. For these and other reasons, claim 34 is believed to be clearly patentable over Alles in view of Shah. For similar and other reasons, dependent claims 35-48, 85, 89 and 102-103 are also believed to be clearly patentable over Alles in view of Shah.

Turning now to claim 49, which recites:

49. (Currently Amended) A programmable controller for use in controlling at least one system of a home, building and/or related grounds, and is

adapted to be hardwired to the at least one system of the home, building and/or related grounds, the programmable controller comprising:

a user interface that includes a display;  
a memory unit for storing a set of schedule parameters; and  
a processor electrically coupled to the user interface and the memory unit, and configured to run a scheduling routine that generates control signals that control the at least one system of a home, building and/or related grounds in accordance with a schedule, wherein said scheduling routine including an editing mode for programming a schedule in the memory unit using the user interface;  
wherein the editing mode allows the user to use the user interface of the programmable controller to concurrently select one or more periods of the schedule for two or more selected days of the week, and to edit the schedule parameters for the selected periods and days.

(Emphasis Added). As can be seen, claim 49 recites a programmable controller that is adapted to be hardwired to the at least one system of the home, building and/or related grounds. The Examiner does not appear to address this element in the rejection. Claim 49 further recites that the programmable controller includes a user interface that includes a display, a memory unit for storing a set of schedule parameters, and a processor electrically coupled to the user interface and the memory unit, and configured to run a scheduling routine that generates control signals that control the at least one system of a home, building and/or related grounds in accordance with a schedule, wherein the scheduling routine including an editing mode for programming a schedule in the memory unit using the user interface. Claim 49 also recites that the editing mode allows the user to use the user interface of the programmable controller to concurrently select one or more periods of the schedule for two or more selected days of the week, and to edit the schedule parameters for the selected periods and days. For similar reasons to those give above with respect to claim 34, as well as other reasons, claim 49 is believed to be clearly patentable over Alles in view of Shah. For similar and other reasons, dependent claims 86 and 90 are also believed to be clearly patentable over Alles in view of Shah.

Now turning to claim 91, which recites:

91. (Currently Amended) A method of programming at least part of a multiple-day schedule on a controller for a home, building and/or related grounds, wherein the controller is equipped with a user interface that includes a display



panel and one or more keys that are separate from the display panel, the schedule having at least one schedule parameter, comprising the steps of:  
selecting two or more days of the week using one or more of the keys;  
changing at least one schedule parameter for one or more periods during the selected days using one or more of the keys; and  
saving the changes to the at least one schedule parameter for the selected days.

As can be seen, claim 91 recites a method of programming at least part of a multiple-day schedule on a controller for a home, building and/or related grounds. Claim 91 recites that the controller is equipped with a user interface that includes a display panel and one or more keys that are separate from the display panel. Claim 91 also recites the steps of: selecting two or more days of the week using one or more of the keys, changing the at least one schedule parameter for one or more periods during the selected days using one or more of the keys; and saving the changes to the at least one schedule parameter for the selected days.

Alles appears to suggest using a touch screen device (e.g. a PDA), with a number of touch activated menus on the screen to set schedule parameters. The Examiner appears to recognize this, but states that Shah discloses "[i]n addition to the controls programmed and displayed on display unit 200, physical buttons of the thermostat 235 could be programmed to be used for working with the user interface system as well. This is similar to the operation of a PDA." The Examiner concludes that at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the PDA interface taught by Alles with the integrated graphical user interface thermostat system taught by Shah. The Examiner further states that one of ordinary skill in the art would have been motivated to modify the PDA interface with the integrated graphical user interface thermostat system to couple a touch-sensitive LCD display with the thermostat's existing central processing unit and RAM.

Applicants do not understand this rejection. As noted by the Examiner, Shah states in general terms that the physical buttons of the thermostat 235 could be programmed to be used for working with the user interface system as well, similar to the operation of a PDA. However, this general statement does not teach or disclose the specific steps of: selecting two or more days of

the week using one or more of the keys; or changing the at least one schedule parameter for one or more periods during the selected days using one or more of the keys. As noted above, Alles clearly teach selecting two or more days of the week by touching the touch screen of the PDA device 80 (see, for example, Figure 20, 2020), and not using buttons which, according to Shah, would be available on the PDA device 80 of Alles. Moreover, Alles clearly teach changing the at least one schedule parameter for one or more periods during the selected days using the touch screen of the PDA device 80 (see Figure 21, 2110), and not using buttons which, according to Shah, would be available on the PDA device 80 of Alles. In view of the foregoing, Applicants do not believe it can readily be argued that claim 91 is obvious over Alles in view of Shah. For similar and other reasons, dependent claims 92-93 are also believed to be clearly patentable over Alles in view of Shah.

Turning now to claim 94, which recites:

94. (Currently Amended) A method of programming a multiple-day schedule on a controller for a home, building and/or related grounds, wherein the controller is equipped with a user interface having a display, the schedule having at least one schedule parameter, comprising the steps of:  
displaying a number of day indicators, each at fixed locations on the display, and each corresponding to a day of the week;  
selecting two or more days of the week;  
displaying a day selection indicator spaced from and adjacent to each of the day indicators that correspond to the selected days of the week;  
changing the at least one schedule parameter for one or more periods of the selected days of the week; and  
saving the changes to the at least one schedule parameter for the selected days.

(Emphasis Added). As can be seen, claim 94 recites a method of programming a multiple-day schedule on a controller for a home, building and/or related grounds. Claim 94 also recites the steps of: displaying a number of day indicators, each at fixed locations on the display, and each corresponding to a day of the week; selecting two or more days of the week; displaying a day selection indicator spaced from and adjacent to each of the day indicators that correspond to the selected days of the week; changing the at least one schedule parameter for one or more periods

of the selected days of the week; and saving the changes to the at least one schedule parameter for the selected days. Note that claim 94 recites both day indicators AND day selection indicators.

In Alles, day selections appear to be indicated by an inverted display of the day indicators, with white areas as black and black areas as white (e.g. its display is inverted) (see, for example, Alles [00161]). This is clearly not “displaying a day selection indicator spaced from and adjacent to each of the day indicators that correspond to the selected days of the week”, as recited in claim 94. Shah does not appear to add anything to Alles in this regard. For these and other reasons, claim 94 is believed to be clearly patentable over Alles in view of Shah. For similar reasons, as well as other reasons, dependent claims 95-96 are also believed to be clearly patentable over Alles in view of Shah.

In addition to the foregoing, dependent claim 95 recites:

95. (Currently Amended) The method of claim 94 further comprising the steps of:  
displaying the at least one schedule parameters at a fixed location on the display; and  
during the changing step, displaying the changed at least one schedule parameter at the corresponding same fixed location on the display.

(Emphasis Added). Alles does not appear to display the at least one schedule parameters at a fixed location on the display, or display the changed at least one schedule parameter at the corresponding same fixed location on the display during the changing step. In Alles, the schedule parameters appear to be displayed on the display screen 2020, at 2008. However, Alles appears to provide pop-up menus, such as pop-up menus 2110 (temperature) and 2010 (time), to change the schedule parameters, whereby the changed schedule parameters appear to be displayed at different locations than in display 2008. Shah does not appear to add anything to Alles in this regard. For these additional reasons, claim 95 is believed to be clearly patentable over Alles in view of Shah.

In addition to the foregoing, dependent claim 96 recites:

96. (New) The method of claim 95 wherein during the changing step,

displaying the day indicators, the day selection indicators and the changed at least one schedule parameter on the display.

Alles does not appear to display the day indicators, the day selection indicators and the changed at least one schedule parameter on the display during the changing step. As noted above, the day indicators appear to be provided on screen 2020, and a pop-up menu, such as pop-up menus 2110 (temperature) and 2010 (time), appear to be used to change the schedule parameters. The pop-up menus 2110 and 2010 of Alles do not appear to include any day indicators or day selection indicators, and would appear to cover screen 2020. Shah does not appear to add anything to Alles in this regard. For these additional reasons, claim 96 is believed to be clearly patentable over Alles in view of Shah.

Now turning to claim 97, which recites:

97. (Previously Presented) A method of programming a multiple-day schedule on a controller for a home, building and/or related grounds, wherein the controller is equipped with a user interface having a display, the schedule having at least one schedule parameter, comprising the steps of:  
selecting two or more days of the week;  
displaying two or more day selection indicators for indicating which of the days of the week have been selected;  
changing the at least one schedule parameter;  
during the changing step, displaying the changed at least one schedule parameter and the day selection indicators on the display; and  
saving the changes to the at least one schedule parameter for the selected days.

(Emphasis Added). As noted above, Alles does not appear to display day selection indicators, and the at least one changed schedule parameter, during the changing step, as recited in claim 97. Instead, both the day indicators and the day selection indicators (which are indicated by an inverted display of the day indicators) appear to be provided on screen 2020. To initiate a changing step, Alles teach providing a pop-up menu, such as pop-up menus 2110 (temperature) and 2010 (time), which appear to cover screen 2020 when displayed. Notable, the pop-up menus 2110 and 2010 of Alles do not appear to display "the day selection indicators on the display", as

recited in claim 97. Shah does not appear to add anything to Alles in this regard. For these and other reasons, claim 97 is believed to be clearly patentable over Alles in view of Shah.

Now turning to newly presented claim 104, which recites:

104. (Previously Presetned) A method of programming a multiple-day schedule on a controller for a home, building and/or related grounds, wherein the controller is equipped with a user interface having a display, the schedule having at least one schedule parameter, comprising the steps of:  
initiating an editing mode within the controller via the user interface;  
providing a visual indication on the display that indicates to a user of the controller that more than one day of the week may be selected;  
selecting two or more days of the week;  
changing the at least one schedule parameter for one or more periods during the selected days of the week; and  
saving the changes to the at least one schedule parameter for the selected days.

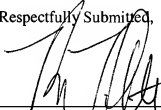
Nothing in Alles appears to teach or suggest many of these steps including providing a visual indication on the display that indicates to a user of the controller that more than one day of the week may be selected, as recited in claim 104. On pages 29-30 of the Office Action, the Examiner states that the “7-Day display 2020” of Alles provides a visual indication on the display that indicates to a user of the controller that more than one day of the week may be selected (citing page 16 [0166]-[0167]). Applicants would like to point out, however, that the “7-Day display 2020” only appears to show the 7-Days across the top of the screen (M-SU). There would appear to be nothing in the “7-Day display 2020” of Figure 20 that provides a visual indication on the display that indicates to a user of the controller that more than one day of the week may be selected. That is, there does not appear to be any visual cues on the display of Alles that would indicate to the user that more than one day may be selected. Rather, it would appear that the user would have to read a user’s manual or the like to know that such functionality is provided. Shah does not appear to add anything to Alles in this regard. For these and other reasons, claim 104 is believed to be clearly patentable over Alles in view of Shah. For similar and other reasons, dependent claims 105-106 are also believed to be clearly patentable over Alles in view of Shah.

Appl. No. 10/726,201  
Response Dated March 15, 2006  
Reply to final office action dated January 19, 2006

In paragraph 9 of the Final Office Action, the Examiner rejected claims 37-40 under 35 U.S.C. § 103(a) as being unpatentable over Alles (2005/0116055 A1) in view of Shah (U.S. Patent 6,595,430), and further in view of Sotak et al. (2005/0108091). For similar reasons given above, as well as other reasons, claims 37-40 are believed to be clearly patentable over Alles in view of Shah and further in view of Sotak et al.

In view of the foregoing, all pending claims 1-9, 12-32, 34-49 and 82-106 are believed to be in condition for allowance. Reconsideration and reexamination are respectfully requested. If a telephone interview would be of assistance, please contact the undersigned attorney at 612-359-9348.

Respectfully Submitted,



Date: March 15, 2006

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